REMARKS

Claims 1-20 are pending in this Application. Reconsideration and further examination of the subject patent application in light of the present Amendment and Remarks is respectfully requested.

Rejections under 35 U.S.C. §103

Claims 1-15 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Pat. No. 6,025,553 to Lee in view of U.S. Pat. No. 6,954,538 to Shiraishi and U.S. Pat. No. 6,021,119 to Derks et al. Applicant respectfully traverses these rejections.

The Office Action asserts that "Lee teaches . . . modulating a tone burst (the tone controller of fig. 4(18)) manipulate the tone burst and see col. 5 line 63-col. 6 line 14) with a frame of data (the package reads on the data frame)" (Office Action of 9/10/09, page 3). However, there is no discussion or even any mention of a tone burst or any manipulation of any tone burst in Lee. In this regard, Lee states that "The amplified signal is . . . regulated . . . to further select its 'high' or 'low' tone through the tone controller 18" (Lee, paragraph bridging columns 5-6). Lee further states that "Each amplified audio input signal is filtered . . . and properly shaped through the tone controller 18 which includes a transistor Q5, resistors R2, R3 and capacitors C2, C3" (Lee, col. 7, lines 31-34).

As such, there is no inherent teaching within Lee of the step of "modulating a tone burst with a frame of data" as under the claimed invention. For example, "To establish inherency, the

extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a give set of circumstances is not sufficient" (In re Robertson, 169 F3d 743, 745 (Fed. Cir. 1999); MPEP §2121 (IV)). In the case at hand, there is no extrinsic evidence that makes clear that "modulating a tone burst with a frame of data" is necessarily present in Lee or that it would have been so recognized by those of skill in the art. Moreover, the transistor Q5, resistors R2, R3 and capacitors C2, C3 of the tone controller 18 (shown in detail in FIG. 6A) clearly establishes that Lee merely receive a filtered signal from the audio inputs 13, 15 for purposes of regulating and shaping the audio signal.

For example, a person of skill in the art would recognize that the step of "modulating a tone burst with a frame of data" would require a tone generator, a means for activating and deactivating a tone generator to generate a burst and some sort of modulating device. None of these devices is present within Lee. Instead, Lee merely shows a tone controller 18 with transistor Q5, resistors R2, R3 and capacitors C2, C3 that merely regulate and shape an audio signal.

Moreover, those of skill in the art would recognize that Lee would require a continuous signal from the audio inputs 13, 15 delivered through the tone controller 18 in order to properly produce a modulated output. As such, "modulating a tone burst with a frame of data" in the tone controller 18 of Lee would render Lee unfit for its intended purpose.

The Office Action asserts that "Lee teaches . . . modulating a tone burst . . . with a frame

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of data (the package reads on the frame of data)" (Office Action of 9/10/09, page 3). However,

the only mention of a package in Lee is in reference to a ROM package (labeled 1 in FIGs. 4, 5 of

Lee). However, as would be well understood by those of skill in the art, a frame of data is a unit

of information. While a read only memory (ROM) may contain data, the Lee ROM 1 is clearly

not a frame of data.

The Office Action admits that "Lee does not explicitly teach a frame of data, including a

header with address information, a payload and a trailer" (Office Action of 9/10/09, page 3). The

Office Action goes on to assert that "Derks teaches a frame of data, including a header with

address information, a payload and a trailer, said payload of said frame of data containing

plurality predetermined, real time status values of monitored functions within said transmitter

disposed within respective predetermined locations of the frame (e.g., the predetermined

locations of the frame can be any predetermined location in the local area network or wide area

network) (see figs. 6-7 and col. 7 line 9-col. 8 line 67 col. 13 line 10-63)" (Office Action of

9/10/09, page 4). However, as would be well understood by those of skill in the art, the locations

of a local area network or wide area network are merely locations within a network that may, in

turn, be identified by a network address. Moreover, while locations within a network may

receive and transmit packets, those locations do not represent frames of data.

In addition, it is nonsensical to suggest that locations within a network are somehow

imbued with information that is not discussed or described. Nowhere within Derks is there any

teaching or suggestion of any "real time status values of monitored functions within said

transmitter."

Shiraishi fails to provide any teaching, whatsoever, regarding the step of "modulating a tone burst with a frame of data." As such, the combination of Lee, Derks and Shiraishi fails to provide any teaching or suggestion of this claim element.

The Office Action asserts that "it would have been obvious . . . to combine the teachings of Derks into the teachings of Lee in order to identify the data packet as response data packet" (Office Action of 9/10/09, page 4). However, as demonstrated above, Lee does not provide any step or apparatus for "modulating a tone burst with a frame of data" and could not be modified to perform such a step without fundamentally changing the way that Lee operates.

Moreover, "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (In re Kahn, 78 USPQ2d 1329, Fed. Cir. 2006). In the case at hand, the reason for combining (i.e., "to identify the data packet as response data packet") has an almost unlimited number of solutions and the vast majority of solutions have nothing to do with the claimed invention. In fact most of the solutions to this problem would be directed to Internet browsers.

Since there are an almost unlimited number of solutions to this problem, the claimed invention would not be obvious under this reasoning. The stated reason for combining, in fact, clearly illustrates the non-obviousness of the invention.

Moreover, the combination appears to be based upon hindsight reconstruction involving information not available at the time of filing of the instant application. The information not available at the time of filing of the instant application is that a portable microphone could

transmit a set of status indicators to a microphone receiver.

Since the combination of Lee, Derks and Shiraishi fail to provide any teaching or suggestion of the method step of "modulating a tone burst with a frame of data" or of "real time status values of monitored functions within said transmitter" , the combination fails to teach or suggest each and every claim limitation and is based upon impermissible hindsight reconstruction. Since the combination fails to teach or suggest each and every claim limitation and is based upon hindsight reconstruction, the rejections are improper and should be withdrawn.

Claim 16 stands rejected under 35 U.S.C. §103(a) as being obvious over Lee in view of Shiraishi, Derks et al. and U.S. Pat. No. 6,337,913 to Chang. Applicants respectfully traverse these rejections.

It may be noted in this regard that claim 16 is dependent upon claim 1 and includes all of the limitations of claim 1. As such claim 16 is limited to "detecting an audio signal . . . ; modulating a tone burst with a frame of data, . . . containing a plurality of predetermined, real time status values of monitored functions within said transmitter disposed within respective predetermined locations of the frame; mixing the modulated tone burst with the detected audio signal; modulating the mixed audio signal and modulated tone burst; transmitting the mixed radio frequency signal and tone burst from the transmitter to the receiver."

Moreover, Chang (as with Lee, Shiraishi and Derks et al.) also fails to teach or suggest these claim limitations. As such, the combination of Lee, Shiraishi, Derks et al. and Chang do not teach or suggest each and every claim limitation. Since the combination does not teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claims 17-20 stand rejected under 35 U.S.C. §103(a) as being obvious over Derks et al. in view of Lee. Applicants respectfully traverse these rejections.

The Office Action asserts that "Derks teaches . . . a CPU (see fig. 4 (40) microcontroller) that digitally provides coded (see col. 4 line 24-col. 5 line 67) and serialized information including a frame of data, containing a header with address information, and a payload including a plurality of predetermined, real time status indicators of the wireless microphone said status plurality of status indicators of monitored functions within disposed within respective predetermined locations of the payload of the frame (reads on local area network or wide area network) (see figs. 6-7 and col. 7 line 9-col. 8 line 67 col. 13 line 10-63)" (Office Action of 9/10/09, paragraph bridging pages 7-8). However, as would be well understood by those of skill in the art, local area or wide area network are merely collections of computers arranged into a computer network. While the computers within a network may receive and transmit packets, those packets would not necessarily involve status indicators of a microphone.

More specifically, Derks fails to provide any indication, whatsoever, of status indicators of a microphone. Moreover, there is no inherent teaching within Derks of the step of any "frame of data containing a plurality of predetermined, real time status values of monitored function within said microphone" as under the claimed invention. For example, "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a give set of circumstances is not sufficient" (In re Robertson,

169 F3d 743, 745 (Fed. Cir. 1999); MPEP §2121 (IV)). In the case at hand, there is no disclosure of microphones and, more specifically, no extrinsic evidence that makes clear that a "frame of data containing a plurality of predetermined, real time status values of monitored function within said microphone" is necessarily present in Derks or that it would have been so recognized by those of skill in the art.

Moreover, those of skill in the art would recognize that Derks is directed to a channelized signal that would not allow "a mixer that mixes detected audio from the microphone with the pilot tone burst." As such, any modification of Derks to include "a mixer that mixes detected audio from the microphone with the pilot tone burst." would render Lee unfit for its intended purpose.

The Office Action admits that "Derks does not explicitly teaches tone burst creation circuitry that incorporates the provided coded and serialized information into a pilot tone burst; a mixer that mixes detected audio from the microphone with the pilot tone burst; a modulator that modulates the mixed audio and pilot tone burst; and a wireless transmitter that wirelessly transmits an the modulated audio signal from the microphone mixed with the pilot tone burst" (Office Action of 9/10/09, page 8). The Office Action goes on to assert that "Lee teaches tone burst creation circuitry that incorporates the provided coded and serialized information into a pilot tone burst(the tone controller reads on a tone burst(the tone controller in fig. 4(18)) manipulates a tone burst and see col. 5 line 63-col. 6 line 14; a mixer (see fig. 4 (20)) that mixes detected audio from the microphone with the pilot tone burst; and modulator (20) that modulates the mixed audio and pilot tone burst; and a wireless transmitter (24) that wirelessly transmits an

the modulated audio signal from the microphone mixed with the pilot tone burst (se fig. 4 and col. 5 line 25-col. 6 line 20)" (Office Action of 9/10/09, page 8).

However, there is no discussion or even any mention of a tone burst or any manipulation of any tone burst in Lee. In this regard, Lee states that "The amplified signal is . . . regulated . . . to further select its 'high' or 'low' tone through the tone controller 18" (Lee, paragraph bridging columns 5-6). Lee goes on to state that "Each amplified audio input signal is filtered by way of two transistors Q3, Q4 of the frequency filter 17 and properly shaped through the tone controller 18 which includes a transistor Q5, resistors R2, R3 and capacitors C2, C3" (Lee, col. 7, lines 31-34).

Moreover, there is no inherent teaching within Lee of "tone burst creation circuitry that incorporates the provided coded and serialized information into a pilot tone burst." For example, "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a give set of circumstances is not sufficient" (In re Robertson, 169 F3d 743, 745 (Fed. Cir. 1999); MPEP §2121 (IV)). In the case at hand, there is no extrinsic evidence that makes clear that "a CPU that provides coded and serialized information including a frame of data containing a header with address information, and a payload including a plurality of predetermined, real time status indicators of monitored functions within the wireless microphone, said plurality of status indicators disposed within respective predetermined locations of the payload of the frame; tone

burst creation circuitry that incorporates the provided coded and serialized information into a pilot tone burst" is necessarily present in Lee or that it would have been so recognized by those of skill in the art. Moreover, the transistor Q5, resistors R2, R3 and capacitors C2, C3 of the tone controller 18 (shown in detail in FIG. 6A) of Lee merely receive a filtered signal from the audio inputs 13, 15.

Moreover, a person of skill in the art would recognize that "tone burst creation circuitry that incorporates the provided coded and serialized information into a pilot tone burst" would require a tone generator, a means for activating and deactivating a tone generator to generate a burst and some sort of modulating device. None of these devices is present within Lee. Instead, Lee merely shows a tone controller 18 with transistor Q5, resistors R2, R3 and capacitors C2, C3 that merely regulate and shape an audio signal.

Moreover, those of skill in the art would recognize that Lee would require a continuous signal from the audio inputs 13, 15 delivered through the tone controller 18 in order to properly produce a modulated output. Since the claims are directed to a tone burst, Lee could not be modified for use with a tone burst without rendering Lee unfit for its intended purpose.

The Office Action asserts that "it would have been obvious . . . to combine the teachings of Lee into Derks so that greatly improves the quality of wireless networks in term of reliability, range/coverage, versatility, and flexibility" (Office Action of 9/10/09, page 8). However, as demonstrated above, Derks does not provide any "mixer that mixes detected audio from the microphone with the pilot tone burst." and could not be modified to perform such a step without fundamentally changing the way that Derks operates.

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Moreover, "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" (In re Kahn, 78 USPQ2d 1329, Fed. Cir. 2006). In the case at hand, the reason for combining (i.e., to improve "the quality of wireless networks in term of reliability, range/coverage, versatility, and flexibility") has an almost unlimited number of solutions and the vast majority of solutions have nothing to do with the claimed invention. In fact most of the solutions to this problem would be directed to multipath rejection and methods of decoding.

Since there are an almost unlimited number of solutions to this problem, the claimed invention would not be obvious under this reasoning. The stated reason for combining, in fact, clearly illustrates the non-obviousness of the invention.

Moreover, the combination appears to be based upon hindsight reconstruction involving information not available at the time of filing of the instant application. The information not available at the time of filing of the instant application is that a portable microphone could transmit a set of status indicators to a microphone receiver.

Since the combination of Derks and Lee fail to provide any teaching or suggestion of "a CPU that provides coded and serialized information including a frame of data containing a header with address information, and a payload including a plurality of predetermined, real time status indicators of monitored functions within the wireless microphone, said plurality of status indicators disposed within respective predetermined locations of the payload of the frame; tone burst creation circuitry that incorporates the provided coded and serialized information into a

pilot tone burst", the combination fails to teach or suggest each and every claim limitation and is based upon impermissible hindsight reconstruction. Since the combination fails to teach or suggest each and every claim limitation and is based upon hindsight reconstruction, the rejections are improper and should be withdrawn.

Closing Remarks

For the foregoing reasons, applicant submits that the subject application is in condition for allowance and earnestly solicits an early Notice of Allowance. Should the Primary Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, the Primary Examiner is respectfully requested to call the undersigned at the below-listed number.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to the issue fee, or credit any overpayment, to Deposit Account No. 23-0920. Should no proper amount be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise
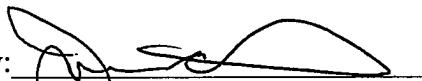
improper or informal, or even entirely missing, the Commissioner is authorized to charge the

unpaid amount to Deposit Account No. 23-0920. A duplicate copy of this sheet(s) is enclosed.

Respectfully submitted,

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